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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/345,195	06/30/1999	BENOIT JULES JURION	13237-2425	9936

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EXAMINER
SINGH, RACHNA

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 01/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/345,195	JURION ET AL.	
	Examiner	Art Unit	
	Rachna Singh	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is responsive to communications: application, filed 06/30/99;

2. Claims 1-22 are pending in the case. Claims 1, 14, 16, 17, and 18 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2 and 6-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hetherington et al., US Patent 6,411,948, 6/25/02 (filed 12/15/98).

In reference to independent claim 1, Hetherington discloses the following:

-System for processing a character entered by a user (compare to ***"receiving a first character"***)

-Determination means of whether the entered character is a valid character for the language selected (compare to ***"determining whether the first character may begin a valid . . .with the selected language"***). See columns 15-16.

Upon receiving a first character, Hetherington teaches a method by which an input method editor determines whether the character is valid. If so, the character process returns to the step to await further character input. Hetherington's invention displays the corresponding character in the display. See figures 5A-5e. Hetherington's invention differs in that he does not necessarily rule out accepting the first character for display if

it cannot begin a valid sequence of characters, but rather he stores it in a altString field which is used to match similar pronouncing characters. It would have been obvious to one of ordinary skill in the art to prohibit the display of the first character altogether if it did not begin a valid sequence of characters according to language rules, as Hetherington's invention recognizes that a character may not be valid, but provides alternatives by taking into account similarly pronounced characters.

In reference to claim 2, Hetherington's method allows for the process of accepting characters to continue in which a determination is made as to whether the entered character, together with any previously entered characters correspond to a symbol or ideograph. See columns 15-16 and figures 5a-5f.

In reference to claim 6, Hetherington's method includes accepting a second character for appending to the first character in order to form a phoneme or complex character. See column 16 and figures 5a-5f, in which the character is displayed in lieu of "ha".

In reference to claim 7, Hetherington does not display the sequence of characters if it is not valid, but provides a means of storing those characters in an altString function to provide characters with similar pronunciations. If the second character is a valid sequence, the second character is displayed with the first. See columns 15-16 and figures 5a-5f.

In reference to claims 8 and 10, Hetherington teaches a method in which the entered characters are simple characters. For example the entry of the word "hayashi"

begins with the character "h" and additionally "a" and "y", which results in the display of a simple character. See column 16 and figures 5a-5f.

In reference to claim 9, Hetherington's method allows the user to enter multiple characters for appending to the next. Thus a first character could be two or more characters.

In reference to claims 11-13, implementing or extending the system of Hetherington to languages such as Thai, Hindi, and Vietnamese would have been obvious to one of ordinary skill in the art since the method of determining a valid sequence was well known in the art (as taught by Hetherington).

Claim 14 is rejected under the same rationale as claim 1 above.

In reference to claim 15, the process of Hetherington determines whether the entered characters correspond to an ideograph. If not, then the process waits for further character input; otherwise it presents matching ideographs to the user. See column 15. The data entry can be initiated again for the user to enter new characters to begin a second sequence of characters. See figure 4 and column 15.

In reference to claim 16, Hetherington discloses processing a character entered by a user. If the character is not a valid character of the language, the input method editor will display the character and wait for an additional character to be added. If the character is a part of the language, the input method editor can either display the character or display the character as a single character until other characters are entered. See columns 15-16 and figures 5a-5f. The rest of claim 16 is rejected under the same rationale used in claim 1 above.

In reference to claim 17, Hetherington's system determines whether the entered characters correspond to a complete ideograph (analogous to complex character). If not, then the process waits for further character input; otherwise it presents matching ideographs to the user. See column 15. After every character is entered for appending to the sequence, the system checks to see if a complete ideograph has been formed. If the character is valid, the system presents the potentially matching ideograph or ideographs to the user. Hetherington's method involves a process that proceeds upon a character being entered (input character) and determines whether the input character in combination with the other characters forms a valid sequence. If the characters do not, it waits for a new character until a valid sequence is made. Hetherington's system checks this for every input character thus it would have been obvious to one of ordinary skill in the art to check if any combination exists among the entered characters throughout the sequence. See columns 15-16.

Claim 18 is rejected under the same rationale used in claim 2 above.

In reference to claims 19-22, Hetherington teaches a system in which the characters entered are used to form a complex character in a language such as Japanese. See columns 1-8.

5. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hetherington et al., US Patent 6,411,948, 6/25/02 (filed 12/15/98) in view of Hetherington (hereafter referred to as Hetherington2), US Patent 6,272,495, 8/7/01 (filed 4/22/98).

In reference to claim 3, Hetherington does not disclose a state transition table in which a state is assigned to the characters according to the rules; however, Hetherington2 discloses a state transition table in which various grammar rules are given a state number. See figure 18. Hetherington2 teaches regular expression definitions which define the structure of a system. For example, a word may consist of 2 or more alphabetic characters. The structure of the regular expression definition is a state transition table. See figure 18. Hetherington2 teaches that grammar files are often used to define all possible text objects in a natural language processing environment. See columns 23-25. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a state transition table as disclosed by Hetherington2 in the system of Hetherington in which characters are assigned certain states in order to determine if appending a character to a string makes a valid sequence since it was well known in the art to utilized state transition tables for grammatical rules (see Hetherington2, column 24).

In reference to claim 4, the process of Hetherington determines whether the entered characters correspond to an ideograph. If not, then the process waits for further character input; otherwise it presents matching ideographs to the user. See column 15. The data entry can be initiated again for the user to enter new characters to begin a second sequence of characters. See figure 4 and column 15.

In reference to claim 5, Hetherington's system does not indicate the use of a state transition table to determine if the second state points to a third transition state representing a reset transition action; however, as Hetherington2 teaches the use of a

transition state table in which an action can be terminated upon coming to the end of a text object. See figure 18. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Hetherington2's state transition table into the system of Hetherington since they both deal with the rules governing languages and their characters.

Response to Arguments

6. Applicant's arguments filed 11/13/02 have been fully considered but they are not persuasive.

Applicant argues that Hetherington teaches inputting Latin alphabet characters, which relate phonetically to a complex character in the Japanese language and similar logosyllabic languages. The inputted Latin alphabet characters are then translated into components of a complex character in the Japanese language or similar logosyllabic language. Applicant claims that the present invention inputs simple characters of a select language, *typically* a language other than those utilizing Latin alphabet characters, wherein the simple characters are actual components in a sequence of characters used to form a complex character. The present invention fails to claim such features. Applicant's claims read receiving characters which can be in any format ranging from Latin alphabet characters to logosyllabic characters. Furthermore Applicant has argued that the present invention inputs characters of a language "typically" utilizing a language other than those utilizing Latin alphabet characters. The invention does not claim only those languages utilizing characters other than those utilizing Latin alphabet characters.

Applicant argues that Hetherington fails to teach or suggest inputting simple characters of a selected language wherein determination is made as to whether a valid sequence is made. The rejections above clearly identify where Hetherington's disclosure would suggest these limitations. Please see above.

Applicant further argues that Hetherington does not prevent the display of erroneously inputted characters. Hetherington's system recognizes when a character begins an invalid sequence. Hetherington displays the character anyhow to enable a user to represent words in alternative representations. As stated above, Hetherington is able to recognize the character as invalid. It would have been obvious to one of ordinary skill in the art at the time of the invention to prohibit the display of a character that did not begin a valid sequence as Hetherington's system is able to recognize the invalid character. Hetherington's only reason for displaying the character is for alternative representations. Thus, he could just as easily have decided not to display such a character.

In reference to claims 3-5, Applicant argues that Hetherington2 is not of analogous art and thus should not be combined with Hetherington. In response to applicant's argument that Hetherington2 is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hetherington2 is used to illustrate that it was well known in the art at the time of the invention to

incorporate state transition tables for grammatical rules. Moreover, Hetherington2 teaches that grammar files are often used to define text objects in natural language processing environments. See columns 23-25. Please see rejections above.

In reference to claims 19-22, Hetherington teaches a system in which the characters entered are used to form a complex character in a language such as Japanese. See columns 1-8.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 5,873,111 Edberg 5/10/96

Bishop, F. Avery, David C. Brown, and David M. Meltzer, "Supporting Multilanguage Text Layout and Complex Scripts with Windows 2000", November 1998, Microsoft

Systems Journal, available:

http://www.microsoft.com/typography/developers/uniscribe/intro.htm.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh at 703.305.1952. The examiner can normally be reached on Monday-Friday from 8:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached at 703.308.5186.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 703.305.3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

After-Final	**703.746.7238**
Official	**703.746.7239**
Non-Official/Draft	**703.746.7240**

Hand-Delivered responses should be brought to Crystal park II, 2121 Crystal Drive, Arlington VA., Sixth Floor (Receptionist).

Rachna Singh
January 12, 2003

JOSEPH H. FEILD
PRIMARY EXAMINER